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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WU, QING YUAN	

ART UNIT	PAPER NUMBER
2196	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,572	KAWASAKI ET AL.	
	Examiner	Art Unit	
	QING WU	2196	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5 and 6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5 and 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/4/11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 3 and 5-6 are pending in the application.

Claim Objections

2. Claim 3 objected to because of the following informalities: "refers to a process-when-violation-occurs-storing-unit to store" on line 19 should read "refers to a process-when-violation-occurs-storing-unit ***which*** store" since process*ing* settings are preconfigured [specification, PG Pub. 2008/0301673, paragraph 59]. Claim 6 is objected to for the same reason. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 1 is rejected under 35 U.S.C. 101 because it is a information terminal claim directed to software alone without claiming associated computer hardware required for execution, and software alone fails to fall within a statutory category of invention. As recited in the claim, the virtual machine, resource managing means can nonetheless be software modules. In addition, resource limit value storing means can nonetheless be software data structures such as queue, table, etc. **Further more, although the claim recites a hardware processor, the context of the hardware processor as claimed is at most for use with the claimed system (information terminal) and not a part of the system. Applicant should consider claiming**

computer hardware as a part of the information terminal to overcome the outstanding 35 USC 101 rejection (i.e. An information terminal comprising: a hardware processor; a plurality of virtual machines…).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3 and 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. As to claim 1, it is unclear whether "said virtual machine" on line 6 refers to one of the "plurality of virtual machines" or all of the virtual machines. For examination purpose, since the limit value of a resource can be different based on different virtual machines [specification, Fig. 5], the examiner is taking the position that the limitation is referring to "one of said plurality of virtual machines" for the remainder of this office action. Claim 5 is rejected for the same reason.

b. As to claim 3, it is uncertain how a ***single*** "request" can be received from "a **plurality** of virtual machines". For examination purpose, the examiner is taking the position that the limitation is referring to a particular one of "a plurality of virtual machines" for the remainder of this office action. Claim 6 is rejected for the same reason.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Schmidt et al (hereafter Schmidt) (U.S. Patent Publication 2005/0177635).

9. As to claim 3, Schmidt teaches the invention as claimed including a computer resource managing method for an information terminal, wherein said information terminal refers to a resource limit value storing unit which stores a limit value of the computer resource usable by a virtual machine, when a request for securing the resource is received from a plurality of virtual machines that execute, on an OS (Operating System), one or more intermediate code programs being a program represented by an intermediate code; if the computer resource that becomes available for said virtual machine by securing the computer resource in response to the request is lower than said limit value, requests said OS to secure the computer resource in response to the request if the computer resource that becomes available for said virtual machine by securing the computer resource in response to the request is equal to or higher than said limit value, does not request said OS to secure the computer resource in response to the request; [server computer referring to a resource limit imposed on applications, intermediate code programs, executing in

virtual machines that executes in an operating system such that resource accesses that are under the resource limit is allow and resource accesses exceeding the resource limit are denied, paragraphs 14, 39-42, 44-47, 49-50 and 87-89; Figs. 1-2, 5 and 8-9] and if the computer resource that becomes available for said virtual machine by securing the computer resource in response to the request is equal to or higher than said limit value, refers to a process-when-violation-occurs-storing-unit to store a process to handle a case when a virtual machine requests computer resource exceeding limit value for each combination of a virtual machine and computer resource, specifies the process to handle a case corresponding to a combination of the virtual machine sending said request and computer resource requested by said virtual machine, and executes the specified process to handle a case [resource usage are limited by means of templates stored in server computer which are application specific and framework module which regulates the resource limitation only comes into effect when a particular resource pertaining to a particular application is violated, 44, 50-53, 61-74].

10. As to claim 1, Schmidt teaches the method for computer resource as recited in claim 3, therefore Schmidt teaches the information terminal for implementing the method.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt as applied to claims 1 and 3 above, and further in view of Churchyard (US Patent 6,510,448).

13. As to claim 6, this claim is rejection for the same reason as claim 3. In addition, Schmidt does not specifically teach each virtual machine is configured to sequentially execute, on an OS, plural intermediate code programs. However, Churchyard teaches context switching among I/O instructions of various applications allowing the applications to execute sequentially [col. 2, lines 39-50; col. 4, line 19-col. 6, line 53]. It would have been obvious to a person of ordinary skill in the art at the time the invention was to have modified the virtual machine based resource allocation and management system of Schmidt to implement context switching within a virtual machine to efficiently utilized resources that are otherwise unused waiting for a blocked process or increasing the overall efficiency of a computing system as being considered by Churchyard [col. 1, line 51-col. 2, line 7].

14. As to claim 5, this claim is rejection for the same reason as claims 1 and 6 above.

Response to Arguments

15. Applicant's arguments filed 4/4/11 have been fully considered but they are not persuasive.

16. In the remarks, Applicant argued in substance that:

a. Applicant's amendment obviated the 35 USC 101 rejection.

b. Applicant's present invention is intended to be applied to a built-in device and presumed user of the device is not a technical expert whereas Schmidt is intended to be applied to a server and presumed user of the device is a technical expert.

c. According to applicant's invention, each of the virtual machines is intended to execute a plurality of intermediate code programs which are switched sequentially.

17. Examiner respectfully traversed Applicant's remarks:

18. As to point (a), applicant's amendment failed to obviate the 35 USC 101 rejection. Please see additional clarification provided above.

19. As to point (b), the examiner respectfully disagrees and submits that applicant's argument are directed to the intended environment where the invention is intended to be used and in no way patentably distinguished the **claimed invention** and the prior art of record. Therefore, applicant's argument is not persuasive.

20. As to point (c), applicant's argument is moot in view of the new ground of rejection necessitated by applicant's newly presented claims. In addition, the examiner suggest claiming the detail of specific violations and violation counts (i.e. threshold) in addition to related

actions/processes performed as a result of the violations to distinguished the claimed invention from prior art of record.

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to QING WU whose telephone number is (571)272-3776. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emerson C. Puente can be reached on 571-572-3652. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QING-YUAN WU/
Primary Examiner, Art Unit 2196